

that originating from healthy plants. In fact the use of defoliant to increase the number of fruit picked has been suggested (32).

Considering the differential sensitivity to defoliation in the course of the development of the tomato plants, the economic threshold of the leafminers varies during the season. Monitoring of the infestation levels is especially advisable early in the season and at mid-season.

CONCLUSION

Depending on the time and the intensity of leafminer outbreaks, the effect of defoliation, resulting from infestation of tomato plants, on both fruit yield and quality varies. Low levels of defoliation are tolerated very well by the tomato plants since the remaining foliage, which nearly always consists of actively photosynthesizing tissue, is responsible for nearly all the nutrient supply necessary for fruit development. Even occasional intermediate defoliations do not result in yield losses. Repeated defoliation at intermediate levels can be detrimental to yield and quality of the tomatoes because there is more continuous interference with the plants' metabolism and diversion of the energy supply from the fruit to the vegetative parts of the plants in order to optimize its photosynthetically active leaf area. Before and at anthesis, the removal of foliage interferes most with subsequent fruit development because of possible growth delay and impaired fertilization. At mid-season, increased sensitivity to defoliation also occurs with the interference of nutrient translocation from the leaves to the fruit.

The following recommendations can be made to the producer. If the defoliation level of the lower canopy in the period before bloom exceeds 30%, specific insecticidal treatment for leafminer control should be applied. After bloom, no control measures need be undertaken until defoliation exceeds the 50% level. If, after specific insecticidal treatments for leafminer control have been applied, a further defoliation of 10% or more occurs, additional treatments are needed. In general, if defoliation levels throughout the season do not exceed 30% in the lower canopy, no specific insecticidal treatments for leafminer control are warranted.